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Winter 6-14-2022

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Ahmad Ismail, AbdulwasIU and Abduljabbar, Tukur, "AVAILABILITY, ACCESSIBILITY AND UTILIZATION OF ELECTRONIC INFORMATION RESOURCES AND SERVICES BY STAFF OF NIGERIAN DEFENCE ACADEMY, KADUNA" (2022). *Library Philosophy and Practice (e-journal)*. 7241.

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**AVAILABILITY, ACCESSIBILITY AND UTILIZATION OF ELECTRONIC
INFORMATION RESOURCES AND SERVICES BY STAFF OF NIGERIAN
DEFENCE ACADEMY, KADUNA**

BY

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ABSTRACT

This paper investigate the availability, accessibility of electronic resources and services and the extent to which these resources were being used by staff of Nigerian Defence Academy. The objectives of this paper were to find out types of electronic resources and services available, accessed and utilized by staff of Nigerian Defence Academy Kaduna, to find out how users access and utilize these resources, to find out the purpose of accessing and utilizing these available resources, also to find out the problems that hinder these use of these resources. A survey research method was used to conduct this study and the instruments used for gathering data was questionnaires. The population of the study was the academic and no academic staff of the institution. A simple random sampling was used to draw a sample size of 326 from the institution. Responses from the questionnaires were analyzed using descriptive statistic. The findings showed that the institution had the following e-resources – computers, VCD/DVDs, Internet access, full text articles, online databases, e-journals, e-books, CD-ROMs, and flash drives. They also used the following electronic services; E-mails, online references, electronic alerts. It is therefore recommended that government should provide adequate funds for the provision of electronic resources and services to enhance teaching, learning, research and training.

Keywords: Availability of Electronic Information Resources and Services, Accessibility of electronic Information Resources and Services, Information Resources, Information Services, Utilization Of Electronic Information Resources, Staff Of Nigerian Defence Academy, Kaduna

INTRODUCTION

The need for timely and easy access to knowledge has transformed the formats in which information is packaged to meet the need of users. The time has passed when traditional or orthodox information resources constitute the sole repository of knowledge in the library. Electronic information resources are gradually dominating the university library although they cannot be said to have replaced print resources in the library. Electronic resources can serve as complement or supplement for traditional resources if the access to information yields more result (Viswanatha & Sasireka, 2016).

Electronic information resources in university libraries make research activities effective when they are rightly provided for effective use. Material availability and utilization comprise a calculated effort towards ensuring adequate provision or deployment of e-resources for learning or conducting research by the cadets, faculty members and other users of the library. Access to electronic information resources for the members of the university community makes the library occupy an important position in learning, teaching, and research. Advances in computer applications during the past few decades have brought radical changes in the way information is gathered, stored, organized, accessed, retrieved, and consumed Sharma (2009). The application of computers in information processing has brought several products and services to the scene. Today's users have their information needs via a number of options they need not come physically to the library to use print formats but can stay at home or the office and access information or online library resources and service via networks or authentication methods at any time.

The impact of electronic information resources and services among staff of Nigeria Defence Academy cannot be over emphasized. Technology in the world system is constantly increasing. Technology has changed the way people reason, behave, collect and exchange ideas or information. It has eventually changed almost all things within and around man and the library is not left out. Man has increased so much in reasoning due to the effect of technology thereby making the quest for knowledge to be increased as well. Information should be accessible, authoritative, reliable, accurate, and timely. Due to the needs of both staff and students for high quality information, libraries have been adopting electronic resources to provide information and services.

Statement of the Problem

Nworgu (1991) stated that a problem is conceived as an unsatisfactory state of affairs which if not rectified, might affect the system adversely. The main aim of any library is to acquire, organize and disseminate information that will assist to achieve its objectives. It has also been

understood and acknowledged universally that the quality of academic input is found traceable to the quality of available sources of the library. The shift from printed forms of information resources to electronic information materials means the academic staff of the university must utilize these resources and service for better quality efficient, and effective research more than ever. Bozimo (2007) and Bozimo (2011) raised the alarm at various meetings of the Committee of University Librarians of Nigerian Universities (CULNU) that eiFLnet (electronic information for libraries network) “has noticed that our usage statistics of electronic resources in our university libraries are very low”. Although Nigeria Defence Academy has conducted workshops, seminars and several times communicated to academic staff, they have not utilized or accessed electronic resources effectively. Few document request forms are submitted in a month requesting for articles through electronic journals and the same is true with utilization of document delivery services and other scholarly databases. This is what brought the need to investigate the availability, accessibility and utilization of electronic information resources and services by staff of Nigeria Defence Academy.

Research Questions

The following research questions are formulated.

1. What types of electronic information resources are available, accessible and utilized by staff of Nigerian Defence Academy?
2. How do users access and utilize the available electronic resources and services?
3. For what purpose do the staff in Nigerian Defence Academy Kaduna access and utilize electronic information resources and services?
4. What types of information services are available and utilized by staff of Nigerian Defence Academy Kaduna?
5. What factors hinder the use of electronic resources and services in Nigerian Defence Academy Kaduna?

Objectives of the Study

The objectives of this study include:

1. To find out the types of electronic information resources and services available, accessed and utilized by staff of Nigerian Defence Academy Kaduna.
2. To find out how do users access and utilize electronic resources and services available in Nigerian Defence Academy Kaduna.

3. To find out the purpose of accessing and utilizing electronic information resources and services by staff of Nigerian Defence Academy Kaduna.
4. To find out the types of information services available and utilized by staff of Nigerian Defence Academy Kaduna.
5. To find out the factors that hinder the use of electronic resources and services in Nigerian Defence Academy Kaduna.

Review of Related Literature

The review in this research work is thus divided into the following sub-titles:

The Concept of Information Resources

Information required by users appears in a variety of formats such as books, serials, maps, compact discs, etc. these formats are collectively called information carriers or entities. Information resources are those items containing information. They are also defined as anything that one consults and obtain information (Aina 2004). Information resources refer to the procedures, equipment, facilities, software, and data that are designed, built, operated, and maintained, to collect, record, process, and store information for later use Ossai (2011). Within the context of library and information studies, information resources can be described as any information in electronic, audio, visual or physical form, or any hardware or software that make possible for storage of information. Information resources consist of all the collection of a library including prints and provided with a view to satisfying information needs of the users to help them perform better in their chosen areas of studies. Such resources include books, journals, reference books, computers, and related electronic gadgets these are usually consulted by customs due to the information contents whether in print or electronic formats.

Types of Information Resources

Information required by users appears in a variety of formats such as books, serials, maps, compact discs, etc. These formats are collectively called information resources Aina (2004). This is because these various objects bear information that is useful to the users of a library, these information resources otherwise called information carriers can be broadly categorized as follows:

- ✓ **PRINT MEDIA:** these are printed texts and they include books, pamphlets, serials, etc

- ✓ **MANUSCRIPTS:** these are writings made by hand or as typescript, such as letters, minutes of meetings, etc.
- ✓ **CARTOGRAPHIC MATERIALS:** these are materials representing the whole or part of the earth surface or any celestial body at any scale. They include two and three-dimensional objects such as maps, atlases, plans, globes, etc.
- ✓ **GRAPHIC MEDIA:** these are two-dimensional representation of materials, which can be viewed without a projector (photographs, drawings, charts, postcards) or those that can be projected without motion by means of an optical device (filmstrips, slides, transparencies).
- ✓ **AUDIO RECORDINGS:** these are information resources that have pre-recorded sound vibrations. They are also called sound recording. They are the equivalent of a printed text that can be recorded on a sound recording such as sound disc, sound cassette, tape reel, gramophone records, compact discs, etc.
- ✓ **AUDIO-VISUAL MEDIA:** these are library materials, which can be used to provide information that can be seen and heard, that is they produce sound as well as images that can be projected with motion. They include motion pictures and video recordings, compact discs, etc.
- ✓ **MICROFORMS:** these are transparent or opaque media bearing images in a reduced form, e.g. microfilm and microfiche. They can be read by use of microform projectors called readers, e.g. microfiche reader.
- ✓ **DIGITAL MEDIA:** these are media in which information is represented in an electronic form, e.g. computer files, diskettes, compact disc, etc.

Information has no value until it is extracted in a required way. The traditional system information resources consisted of print media. In the print the information was in a paper and the book form Kawatra (2011).

According to kawatra (2011) two varieties of information resources are readily recognizable. These are:

- ✓ Documentary resources which include primary, secondary and tertiary resources
- ✓ Non documentary resources

Documentary Resources

❖ Primary resources

Primary information resources appear in different formats, viz. monographs, books, journals, reports, technical bulletins, theses, etc.

❖ Secondary resources

Secondary information resources are published for achieving bibliographical control of the literature. They include all reference books such as encyclopedia, directories, yearbooks, almanacs, biographical sources, geographical sources, etc.

❖ Tertiary resources

These are information resources that have produced after the distillation and filtration of primary and secondary information resources.

Non-Documentary Resources

Information is not always obtained from documentary information resources. In some circumstances, it is more helpful to put the user directly in touch with an expert or specialist who can provide an immediate answer than to furnish documents or written summaries of information from which the user must extract what he wants to know. This is specially so when the required information or knowledge is so new that it has not yet appeared in published form.

Electronic Information Resources

These are data and program files which store information. They are files that can only be accessed by a computer. These files are generally kept as floppy diskettes, CD-ROM discs or internet resources. Electronic resources represent an increasingly important component of collection building activities of libraries. "Electronic resources" refer to those materials that require computer access, whether through a personal computer, mainframe, or hand held mobile devices. They may either be accessed remotely via the internet or locally Konappa (2014).

Kimber (1968), defined electronic resources as "those information stored in a medium which requires an electronic devices to read its contents" information stored in different electronic media such as floppies, CD Rom, magnetic tapes video cassettes etc. could only be accessed or retrieved with the help of other electronic devices such computers, video players, tape recorders, DVD players etc. Katz, (1997) defines electronic resources as "those information

resources which users access electronically via a computing network from inside the library or remotely to the library” electronic information resources are therefore resources that are generally in the form of online books, online journals, online magazines, online newspaper, and internet based resources, email publishing, wireless publishing, web publishing, online and offline database that are mounted on CD Rom etc. These are either through open access international donors or commercial vendors e.g. Ebscohost, Hinari, DOAJ, science direct, SAGE, etc the electronic information resources have become a major element of university library collections worldwide. Electronic information materials or electronic information resources deal with one and same concept that, “the material providing information accessible through computers and stored on electronic devices”. The non-conventional category of documents constitutes largely the electronic sources of information Kawatra (2011).

Types of Electronic Information Resources

Konappa (2014) stated that some of the most frequently encountered types are:

- ❖ E-journal
- ❖ E-books
- ❖ Full-text (aggregated) databases
- ❖ Indexing and abstracting databases
- ❖ Reference databases (biographies, dictionaries, directories, encyclopedias, etc.)
- ❖ Numerical and statistical databases
- ❖ E-images
- ❖ E-audio/visual resources.

Nature of Electronic Information Resources

These electronic resources could be of varied nature Konappa (2014). Broadly, we could categorize them as follows:

- ❖ Primary sources of information:

These include electronic conferences, electronic journals, electronic pre-prints and e-prints, electronic theses and dissertation, patents, standards, technical reports, projects reports including status reports of current ongoing project news, software, courseware tutorials, manuals, and the like.

- ❖ Databases, datasets, and other collections:

These include abstracting and indexing databases, digital collections comprising images, audio; video; scientific datasets comprising numeric, properties, structural databases, library catalogues; virtual libraries; museums and archives, etc.

❖ Electronic books:

Such as Net library (<http://www.netlibrary.com/>); Ebrary (<http://ebrary.com/>). Etc. Generally online book selling and print-on-demand features also facilitated. For instance Net library has entered into print-on-demand marketplace. Similarly, Amazon.com (termed as the largest library-though not a library in true sense of the word) facilitates online book selling (<http://www.amazon.com>).

❖ Organizations and people:

Information about organizations and people ranging from funding agencies to libraries; directories of people of varied nature (scientists, archeologists, etc.)

❖ Meta resources:

Resources that facilitate easier access to network based resources in a defined subject area and plethora of such resources under various names available on the internet, such as subject gateways, virtual libraries; clearing house; pathfinders and the like.

Advantages of Electronic Information Resources

Electronic information resources provide many advantages over the conventional information resources (Kawatra 2011). These are in the following ways:

- ❖ Provide 24x7 accesses i.e. round the clock access.
- ❖ Universal accessibility.
- ❖ Provide access to more information than possible to physically acquire and maintain.
- ❖ Remote access to expensive and rare material.
- ❖ Solving massive storage problems
- ❖ Saving physical i.e. creation of more space in the library.
- ❖ Ability to link indexing and abstracting database.
- ❖ Accessibilities from user's home, office etc.
- ❖ Ease of maintenance.
- ❖ Ability to take statistics of usage that is not available for print collection.

Kimber (1968) also stated some of the advantages of electronic resources such as:

- ❖ House storage capacity.
- ❖ Data security.
- ❖ Save space.
- ❖ Easy to handle.

Also Kumar (1978) in Gama (2008) states the importance of electronic information service services to its parent organization as:

- ❖ Library support
- ❖ Library service
- ❖ Organization of the library
- ❖ Circulation of documents
- ❖ Book selection
- ❖ Cataloguing and classification of library materials

Consequently, according to Gama (2008), “The emergence of electronic resources has tremendously transformed information handling and management in Nigeria academic environments, and university libraries in particular. Hence the need for development of Electronic in Nigerian University libraries to support quality teaching, learning and research is imperative and cannot be overemphasized.

Availability of Electronic Resources and Services

Traditionally, libraries were repositories for physical pieces of information and knowledge, and librarians served as mediators between the users and the information in their custody. Rosenberg (2005) pointed out that the demand of emerging models of distance learning, user needs in virtual settings and new technologies have challenged older organizational structures of libraries. Increasingly, information is being created and offered in digital format. This transition has required significant changes in tools and roles of the libraries.

Tamaro (2006), indicated that in a library the electronic resources collection include – websites, data bases, electronic journals, electronic books, CD-ROMs DVD-ROMs, audiovisuals and multimedia, dissertations and students projects. He listed electronic services to include:

- ❖ Mail based – offering information sharing services;
- ❖ Bulletin boards for libraries - providing a description of internet resources and current awareness services;
- ❖ OPAC- a data base describing documents via bibliographic entries composed of fields, some of which maybe queried. It provides access to bibliographic records for

the entire collection of books, back volumes videos and films of the library. OPAC can be searched in many ways as shown by accession number, title, author, serial number, subject etc.

- ❖ **Portals/Gateways**-These are subject gateways that are important components of a library website designed for users to help them discover high quality information on the internet in a quick and effective way. They allow easier access to web-based resources in a defined area. They have web pages that contain lists of links to resources.

Mulla and Chandrashekara (2006) observed that the availability of electronic resources depend on the availability of funds as well as the demand for their use. Rosenberg (2005) noted that access of Nigerian university libraries to the EBSCOHOST online database was first made possible by NULIB Consult, which is a consortium for the Committee of University Librarians of Nigerian Universities (CULNU). In 2002, the continued subscription of Nigerian University Libraries to EBSCOHOST was taken over by the Education Trust Fund (ETF) from 2005-2010. In a study conducted by Liverpool John Moore University (LJMU) on the provision of electronic information resources in Nigerian libraries, Ashcroft and Watts (2005) examined existing electronic information resources and barriers obstructing effective provision of electronic information. The study observed that electronic resources are better provided through consortia efforts as the main benefits are that of rationalization and cost savings. They observed that a consortium can comprise both large and small institutions and both public and academic libraries through a wide area network (WAN). This observation is in agreement with the position of CULNU, which formed a consortium, NULIB, through which Nigerian university libraries subscribe to electronic resources and services, among many of its other activities.

Accessibility to Electronic Information Resources

The development of electronic information resources has made it easier to access relevant information in different areas especially for teaching, learning and research. The academics in developing countries Nigeria inclusive will need to utilize internet as a source of information for teaching, learning and research development. Electronic information resources have become an integral component of academic library collection worldwide. The resources are regarded as essential for teaching, learning and research activities. Electronic information resources are convenient to search and access vast amount of information within the possible

time. A good numbers of electronic database are available on the internet, which can be accessed free of charge or through university's subscription to provide access to their customers to support academic works or activities specifically in the area of teaching, learning and research as well as self and community development encourages libraries to embark on selective dissemination of information as this will advertise and market the available resources and services to those in need of them. It will also give access to the right information by the right information seekers. Letchmanan and Tarmizi (2011) conducted a study where it was found that factors such as easy access reduces physical visit to library. The user-friendly features of online resources offer a comfortable platform for participants to use E-books, E-journals, E-magazines, e-newspaper, E-thesis, E-dissertation etc. many staff and students in universities rely solely on electronic information resources as their source of information because they provide many advantages over the conventional or traditional information resource. Electronic resources contain current information because they are updated frequently. They offer advanced search capabilities and offer flexibility in the storage of results. They enable access and utilization of information without restriction of either time or location.

Utilization of Electronic Resources and Services

Bozimo (2007) and Bozimo (2011) raised the alarm at various meetings of the Committee of University Librarians of Nigerian Universities (CULNU) that eiFL.net (electronic information for libraries network) "has noticed that our usage statistics of electronic resources in our university libraries are very low". Utilization of electronic resources and services deals with the use of variety of electronic resources and service for teaching, learning, and research activities. Such resources include, online books, journals, thesis, dissertation, online newspapers, magazines, indexes, abstract, internet based search engines, online database, offline databases, online encyclopedia, online dictionaries etc. Electronic resources (online/offline) are used for the purpose of conducting scientific researches, teaching and community development. The academic libraries now need to specialize in new ways of information handling and dissemination such as knowledge navigation and distilling data into such formats that can engage the patron's interest. This is one way to convince the patrons that "In this age of technology".

An important factor that influences the use of electronic resources when they are provided is the user's awareness of their availability in the library. But how does the library make patrons aware of resources that occupy no traditional shelf space and how does it determine what kind of patron support are needed in the new electronic realm? In view of this Weingart and

Anderson (2000) reported that since electronic resources occupy no traditional shelf space, the best way to create awareness for their availability in libraries is for libraries to inform users of each new resource as it is acquired, provide training opportunities for library users and the mechanics of remote access to resources. Ray and Day (1998) and Borgman (1996) noted that the use of online electronic resources and retrieval systems require a basic knowledge of computing and searching skills. This is because library databases use web based technologies that may not be very different from the general web based resources. Whitmire (2001) observed that the use of electronic resources is also influenced by students' use of the library. The more a student uses the library the more familiar he becomes with its resources including its electronic resources. Tenopir (2003) reported that electronic resources reveal differences in use, the heaviest users being from the areas of science and technology because they adopted the use of electronic journals and other digital library resources. On his part, Ibrahim (2004) observed that business schools in the United Arab Emirate were also early adopters of electronic resources use. However, it is recorded that members of the arts and humanities are the least adopters of electronic resources use. Chris et al (2001) reported that resources used most by students are the OPAC to find books and other holdings of the library. This is so because it is the one most students are introduced to or exposed to during inductions to create awareness. Similarly Ehikhamenor (2003) posited that facilities that attracted the greatest amount of patronage were e-mails, catalogues and databases, e-journals, www resources and software. However Pullinger (1999) observed that the extent to which the use of E-journals becomes part of normal research practice depends not only on the discipline concerned but also on the role and status of the researcher, the resources and on the specific information needs.

The effective use of electronic resources requires necessary relevant computing skills. In a study of faculty's use of electronic resources, Waldman (2003) found out that use was influenced by factors such as computing skills of academics, their age, and gender. Majid (1999) found a significant relationship between computing skills and use of electronic resources in the library including online public access catalogues (OPAC). Ray and Day (1998) reported that the most popular method for acquiring the necessary skills to use electronic resources is via individual trial and error, colleagues or peers and guidance from library staff. Steinmuella (2001) attested to this position when he suggested that many information and communication technology (ICT) users are self-taught and are capable of developing an understanding of ICTs through utilizing them. Bruce (1998) also asserted that

the knowledge required to search the internet was not acquired by attending a formal training course or courses but rather through self-instruction with significant assistance from friends and colleagues.

Limitations of Electronic Resources

Kawatra (2011) outlined some of the challenges or limitations of electronic information resources as follows:

- ❖ Lack of screening or validation
- ❖ Lack of quality control and editing standards
- ❖ Lack of preservation of a fixed copy (for the record and for duplicating scientific research)
- ❖ Lack of preservation of “best in class”
- ❖ Difficulty in knowing and locating everything that is available, and differentiating valuable from useless information
- ❖ Job loss for traditional publishers and librarians
- ❖ Costs are spread and many become hidden

Information Services

The library in a community provides a unique service that should be accessible to everyone. Kumar (1978) in Gama (2008) defines information service as a service provided by a specialized information system which draws attention to the information possessed in the system or information provided in anticipation of demand. This could be done by providing reference and information service, preparation and circulation of new materials, preparation of bibliographies, inter-library loan, translation service, indexes, abstracts, creation of database, and photocopying service.

Information service is any activity performs to add value to the existing or prospective information available in your system Aina (2004). ‘It is a service provided by, or for, a special library which draws attention to information possessed in the library or information department in anticipation of demand: this is done by preparing and circulating news sheets, interactive surveys, reading lists, abstracts, particulars of articles in current periodical etc. which it is anticipated will be of interest to potential users of the service (Librarian’s Glossary of Terms).

Types of Information Services

The services provided to users of individual libraries depend on the objectives of the parent organization. The services provided in a library will differ from one library to another but

there are certain services that are common to all libraries Aina (2004). That is to say the services could either be general or specialized.

General Information Services

Aina (2004) outlined general services as follows:

- ❖ Lending services
- ❖ Inter-library loan service and document delivery
- ❖ Reservation service
- ❖ Provision of seating and study facilities
- ❖ Reference service
- ❖ Current awareness service
- ❖ Exhibition and display service
- ❖ Library publications
- ❖ User education
- ❖ Information literacy programme

Specialized Information Services

There are some specialized services that are provided by different types of libraries to their users. These include:

- ❖ Literature search
- ❖ Selective dissemination of information
- ❖ Referral services
- ❖ Translation service
- ❖ Extension and outreach service
- ❖ Rental of premises

Electronic Information Services

Technology has helped solved the problems patrons face in accessing a few copies of textbooks that are available in the library (Adeniji, Adeniji and Oguniyi(2011). Sloan (2002) in Gama (2008) described electronic services as those services that involve the collaboration between library user and librarian in a computer-based medium, which utilized various media such as e-mail, Web forms, chat, Video, Web customer call centre software, voice over internet protocol (VoIP), etc.

Application of ICT to Information Services

Having known what electronic information resources and services with their forms are, we shall now discuss briefly how computer and communication technologies are used in

carrying out information service(s). Gama (2008) stated some information services that could be rendered with the aid of ICT facilities. These are discussed below.

Online reference service:

Asynchronous tools such as 'email, subject gateways, FAQs, and electronic libraries and interactive tools like chat rooms, virtual reference desk, and ask-a librarian are replacing the conventional means of post, phone or in-person reference enquiries. Ask-a-Librarian allows the user to click on ask-a-librarian link to send a formatted enquiry to the reference librarian. The reference librarian either provides an answer, links to resources or link to a subject expert. Interactive tools now allow a reference interview online.

Online Bibliographic Service

Compilation of bibliographies, reading lists and state-of-art reports are very Parts of LIS work, particularly in research and academic libraries. Browsing through the manual indexes and abstracts is a tedious and time consuming work, and does not always produce up to date result. Availability of databases in electronic form on CDROM or online, offers convenient, efficient and cost effective information retrieval. Electronic databases also provide unique search features such as searching on multiple criteria (key-word, subject, author, source, classification code, year of publication, language etc.), and variety of display formats & styles. Advance features like natural language query ranking the search results is also available in many databases. Web based services facilitate full text searches and link to full text of the documents. Dialog, STN and Silver Platter are some of the popular database companies that offer bibliographic and reference databases on CDROM and Online platforms.

Online Selective Dissemination of Information (SDI)

This type of service is very common in special libraries. The main objectives of SDI are to provide users (especially in special libraries) with information that will promote their research and other day –to-day activities. It also relieves the user of the problem of sieving through a large number of documents before getting the relevant documents. Thus, the time saved for the user could be used for other purposes. It is customize service which is very common in many academic and special libraries Aina (2003). Just as the name implies, SDI is for selected users. Here you consider the interest of your users; you get relevant material that will meet their needs and then notifying them. This could be done by sending text messages using telephone, send e-mail to them via the internet, or letters to your users. It is important to note that this service is not for all, but for special users.

Online Current Awareness Service (CAS)

Strauss et-al (1964) in Aina (2003) defined current awareness service as the establishment of a system for reviewing publications immediately received, selecting information pertinent to the program of the organization served, and recording individual items to be brought to the attention of those persons to whose work are related.

Current Awareness Service is simply an act of creating awareness of new information resources as they arrive. Current Awareness Services has been important means for keeping the users up to date in their areas of interest. A current awareness service may be as simple as copy of table of contents or a bulletin containing bibliographic records, of articles selected from the current issues of journals and other material, and usually organized by subjects. Libraries now compile current awareness bulletins using predefined search-strategy and running on the database either on CDROM or online periodically and getting the desired output. Subject to copyrights, the output can also be stored on a local system, and disseminated online (internet, intranet) and offline (print, CDROM, e-mail). Table of contents of most journals are available free from the publishers' sites. Some publishers even offer free email update of table of contents. A large number of electronic publishing sites or portals now offer current information via email to registered users. For example one can register on New York Times newspapers to receive summary of news on daily basis. The essence of this service is to keep clients (users) up-to-date with the happenings in their subject area daily.

Online Inter-Library Loans and Union Catalogue

As described earlier, no library can fulfil all the needs of its users from its collection. Resource sharing through Inter-library loan is a necessity for the libraries. Access to the catalogue of partner libraries is crucial to inter-library lending. Union catalogues, standardization and machine readable catalogues are aimed at promoting resource sharing. Printed union catalogue and Computer Output on Microfiche (COM) catalogues and CDROM are now being replaced by web OPAC and web based union catalogues. Librarians can now access catalogues of thousands of libraries across the world using internet. Developments in digital library and internet technologies have made it possible to automatically update the catalogue records from member library system, distributed searches using a single user interface and value added services.

Online Library Consortium

'Library consortium' may be defined as "an association or group of libraries who come together to achieve the common goal of 'optimum users satisfaction' with the participation in a common activity and sharing the resources." Ratna Nandi. With the advent of ICT and its

application in library activities, new opportunities opened up for greater cooperation among libraries. In recent years availability of information resources in digital or electronic medium has further facilitated exchange of information resources among libraries, thus creating favourable condition for increased resource sharing. Consortium of libraries is well known for sharing of resources all over the world. Several libraries in the world have formed consortia to share their human and electronic resources.

However, Consortium now being overheard everywhere is because of digital form of information. It refers to co-operation, co-ordination and collaboration between and amongst libraries for the purpose of sharing information resources. The internet plays a vital role in achieving this.

METHODOLOGY

The survey method was used to conduct this study. This is because, as Osuala (2005) puts it, a survey research studies both large and small populations, and by selecting and studying samples chosen from the population, it helps to discover the relative incidence, distribution and interrelations of variables. The population of this study consisted both academic and non academic staff of every department including the library of this institution which constitute the population of 326 as shown in the table 1 below.

Table 1: Population of the Study

Faculties	No. of Academic staff	%	No. of Non Academic staff	%	Total
Military and Interdisciplinary studies	68	20	23	7	91
Science and Engineering	71	21	18	5	89
Arts and social science	89	27	32	10	121
Library	21	6	4	1	25
Total	249	75	77	23	326

The above data show the population of the study as obtained

Response Rate

Ninety eight (98) copies of the questionnaire were distributed to academic and non-academic staff of the faculties and the library of the institution. Out of these, only 70 questionnaires were returned on completion, which represents 71.42%. This high rate was achieved as a result of the cooperation and assistance received from the research assistants in the various faculties and library studied. The response rate from the various faculties is shown in table below.

Table 2: Response Rate

Respondents	No. of questionnaire administered	No. of questionnaire returned	Percentage %
Academic Staff	75	60	86%
Non-academic Staff	23	10	14%
Total	98	70	100%

The data in the table above reveals that, 60 academic staff which constitutes 86%, have responded. While 10 non-academic staff constitute 14% of the respondents responded also. Among the respondents, there were 50, (71%) males and 20, (29%) females.

Table 3: Ranks of the Respondents

Respondents	Frequency	Percentage
Academic Staff	60	61%
Non-academic Staff	10	10%
Non response	28	29%
Total	98	100%

The table above shows that 60, (61%) of the respondents were academic staff, and 10, (10%) were non-academic staff from the various faculties and library. Also 28, (29%) did not indicate their status.

Table 4: Frequency table of the respondents according to their qualification

Respondent's qualification	Frequency	Percentage %
SSCE, GCE, TCII	6	9%
NCE, ND, OND	4	6%
HND, BSC, B.A BLIS	30	43%
MSC, M.A, MLS	20	29%
PhD	10	14%
Others	Nil	Nil
Total	70	100%

The table above reveals that there is high number of HND, BSC, B.A and BLIS in the institution with 43% of the total number of the respondents. Those respondents with 29% are with MSC,M.A and MLS. Those respondents with PhD carry 14% of the entire respondents. While those with SSCE, GCE and TCII have 9%. Also 4% of the respondents are those with NCE, ND, OND respectively.

Table 5: Available electronic information resources available in your library

S/No	E-resources	Frequency (Yes)	%	Frequency (No)	%	Total
1	Computer	60	86	10	14	100
2	VCD	53	76	17	24	100
3	DVD	49	70	21	30	100
4	CD Rom	50	71	20	29	100
5	Flash drive	60	86	10	14	100
6	VCD/DVD player	30	43	40	57	100
7	Internet	55	79	15	21	100
8	Electronic Books/Journals	59	84	11	16	100
9	Total	416		144		560

The table above is on availability of electronic information resources in Nigeria Defence Academy Kaduna State. It reveals that the computer and flash drive had the highest frequency i.e. they are available than the other resources as they constitute 60 (86%), followed by electronic books/journals 50 (84%), internet 55 (79%), VCD 53 (76%). The electronic resources that had the lowest frequency are CD ROM 50 (71%) and VCD/DVD player 30 (43%).

Table 6: Access to Electronic Resources

S/no	Electronic resources	At home	%	At school	%	At work	%	From friends	%	Total
1	Computer	45	64	5	7	10	14	10	14	100
2	VCD	50	71	5	7	5	71	10	14	100
3	DVD	46	66	4	6	5	71	15	21	100
4	CD-ROM	10	14	20	29	20	29	20	29	100
5	VCD/DVD Player	50	71	5	7	5	7	10	14	100
6	Flash Drive	40	57	20	29	5	7	5	7	100
7	Electronic Books	25	36	25	36	10	14	10	14	100
8	Electronic Journals	20	29	30	43	10	14	10	14	100
9	Total	286		114		90		90		560

The above table is on accessibility of electronic information resources available in the university. In response to question as to where they access electronic resources, table 4.4.2 indicated that 50 (71%) of the respondents access VCD/DVD player at home, 50 (71%) of the respondents also access VCD at home. 46 (66%) access DVD at home and 45 (64%) access computer at home. It also revealed that only 20 (29%) of the respondents access CD both at school and work. 40 (57%) access flash drive at home. For the electronic books, 25 (36%) of the respondents access them at home and school. This has shown that there is low access to electronic resources at school, work and from friends. This result is in line with the assertion of Bozimo (2007) and Bozimo (2011) raised the alarm at various meetings of the Committee of University Librarians of Nigerian Universities (CULNU) that eiFLnet (electronic information for libraries network) “has noticed that our usage statistics of electronic resources in our university libraries are very low”.

Table 7: Awareness of Electronic Resources and Services

Electronic resources	Frequency (aware)	%	Frequency (Not aware)	%	Total
From the reference desk	30	43	40	57	100
From friends	20	29	50		100
From library' websites	10	14	60	86	100
From workshops	14	20	56	80	100
From lecturers/teachers	25	36	45	64	100
Leaflets from library	45	64	25	36	100
Through alerting services	65	93	5	7	100
Others	Nil	0	Nil	0	Nil
Total	209		281		490

The table 7 above is on awareness of the presence of electronic information resources. The reveals that 65 (93%) of the respondents became aware of the existence of electronic resources through alerting services. While other respondents 45 (64%), became aware through leaflets from the library. 30 (43%) of the respondents became aware from the reference desk. It also shows that 10 (14%) of the respondents became aware of these available resources through the library website.

Table 8: Electronic resources you know

S/No	E-resources	Frequency (Yes)	%	Frequency (No)	%	Total
1	Computer	60	86	10	14	100
2	VCD	53	76	17	24	100
3	DVD	49	70	21	30	100

4	CD ROM	50	71	20	29	100
5	Flash Drive	60	86	10	14	100
6	Internet	55	79	15	21	100
7	Electronic Books/Journals	59	84	11	16	100
8	Others	Nil	Nil	Nil	Nil	Nil
9	Total	386		104		490

Table 8 is on electronic resources known by staff of Nigeria Defence Academy, Kaduna. That table shows that 60 (86%) of the staff know computer and flash drive respectively. While 55 (79%) of the respondents know internet as an electronic resources. 59 (84%) of the staff know electronic books/journals in the University. 53 (76%), 50 (71%) and 49 (70%), know VCD, CD ROM and DVD respectively. The implication of this finding is that these staff may know these resources at home, from friends, but not for academic purposes.

Table 9: Electronic Services you know

S/No	Electronic services	Frequency (yes)	%	Frequency (no)	%	Total
1	OPAC	50	71	20	29	100
2	Portal/Gateways	20	29	50	71	100
3	Online reference work	40	57	30	43	100
4	Emails	55	79	15	21	100
5	Bulletin boards	10	14	60	86	100
6	Electronic alerts	10	14	60	86	100

7	Facebook	50	71	20	29	100
8	Others	5	7	65	93	100
9	Total	240		320		560

Table 9 is on electronic services known by the staff of the Academy. The table reveals that 55 (79%) of the respondents know E-mail as one of the electronic services in the university. 50 (71%) of the know respondents know OPAC (online public access catalogue) and facebook respectively. 10 (14%) has low knowledge about bulletin boards and electronic alerts respectively. While 20 (29%) of the respondents know portal/gateways as electronic services in the university. 40 (57%) of the respondents have knowledge about online reference work in the university.

Table 10: Types of Electronic Resources used for Academic Purposes

S/No	E-Resources	Frequency Used	%	Frequency Not used	%	Total
1	Computer	60	86	10	14	100
2	VCD	53	76	17	24	100
3	DVD	49	70	21	30	100
4	CD ROM	50	71	20	29	100
5	Flash Drive	60	86	10	14	100
6	Internet	55	79	15	21	100
7	Electronic books/Journals	59	84	11	16	100
8	Others	10	14	60	86	100
9.	Total	396		164		560

Table 10 is on the types of electronic resources used by the staff of Nigeria Defence Academy, Kaduna for academic purposes. 60 (86%) of the respondents use computer and flash drive for academic activities. 59 (84%) used electronic books/journals for academic activities which may include research, reading and teaching. 55 (79%) of the staff used internet as electronic resources. 53 (76%), 50 (71%), and 49 (70%) used VCD, CD-ROM, and DVD as electronic resources for academic activities respectively. 10 (14%) of the other respondents used other resources which include E-image, radio, tape recorder as electronic resources for academic purposes. This is in line with Konappa (2014) who stated that some of the most frequently encountered types are E-journal, E-books, Full-text (aggregated) databases, Indexing and abstracting databases, Reference databases (biographies, dictionaries, directories, encyclopaedias, etc.), Numerical and statistical databases, E-images, E-audio/visual resources.

Table 11: Types of Electronic Services used for Academic purposes

S/No	Electronic services	Frequency used	%	Frequency not used	%	Total
1	OPAC	50	71	20	29	100
2	Portal/Gateways	20	29	50	71	100
3	Online reference work	40	57	30	43	100
4	Emails	55	79	15	21	100
5	Bulletin boards	10	14	60	86	100
6	Electronic alerts	10	14	60	86	100
7	Facebook	50	71	20	29	100
8	Others	5	7	65	93	100
9	Total	240		320		560

Table 11 is on electronic services used for academic purpose. The table shows that 55 (79%) of the respondents used electronic mails as electronic services used for academic purposes. These include sending of messages, mails, Images etc. 50 (71%) of the respondents used facebook, OPAC as electronic services. It has also showed that 10 (14%) of the respondents used bulletin boards, electronic alerts as electronic services for academic purpose. 5 (7%) is for other respondents that used other electronic service like online library consortium, online selective dissemination of information, online current awareness services. This finding goes with the contribution of Sloan (2002) in Gama (2008) who described electronic services as those services that involve the collaboration between library user and librarian in a computer-based medium, which utilized various media such as e-mail, Web forms, chat, Video, Web customer call centre software, voice over internet protocol (VoIP), etc.

Table 12: Frequency of use of Electronic resources and services

S/no	Options	Frequency of use	%	Frequency not use	%	Total
1	Daily	60	86	10	14	100
2	Weekly	50	71	20	29	100
3	Monthly	40	57	30	43	100
4	Never	20	29	50	71	100
5	Total	170		110		280

Table 12 is on frequency of use of electronic resources and services. This table reveals that 60 (86%) of the respondents used electronic resources and services daily. While 50 (71%) of the staff used these available resources and services weekly. 40 (57%) of the respondents used the resources monthly. 20 (29%) of the respondents never used the resources available in the university at all.

The implication of these finding is that, those resources used by the staff might be not for academic purposes. The use of these resources and service may be for other purposes like administration, processing of students results, registration of students etc.

Table 13: Reasons for using electronic information resources and services

S/no	Options	Frequency of use	%	Frequency not use	%	Total
1	Study	60	86	10	14	100
2	Research	60	86	10	14	100
3	Socialize	30	43	40	57	100
4	Chat	20	29	50	71	100
5	To check or send e-mail	55	79	15	21	100
6.	Others	10	14	60	86	100
7	Total	235		185		420

Table 13 above is on reasons for using electronic information resources and services. This table reveals that 60 (86%) of the respondents used the available electronic resources for study and research respectively. 55 (79%) use these resources to check or send e-mail. 30 (43%) of the respondents use electronic resources to socialize. While 20 (29%) of the respondents use these resources to chat. While 10 (14%) of these respondents used these resources for other activities like making calls, listening to news etc. Based on this finding Kawatra (2011) asserted on uses of electronic resources as Providing 24x7 accesses i.e. round the clock access, Universal accessibility, Provide access to more information than possible to physically acquire and maintain, Remote access to expensive and rare material, Solving massive storage problems, Saving physical i.e. creation of more space in the library, Ability to link indexing and abstracting database, Accessibilities from user's home, office etc, Ease of maintenance, Ability to take statistics of usage that is not available for print collection.

Table 14: Factors That Influence the Use of Electronic Resources

SCALE

S/No	Factors	SA	%	A	%	UD	%	SD	%	D	%
1	Computer library	60	86	40	57	56	80	58	83	20	29
2	Adequacy of electronic resources	60	86	58	83	20	29	56	80	40	57
3	Absence of support	20	29	56	80	40	57	60	86	58	83
4	Absence of ICT technicians	56	80	20	29	60	86	40	57	58	83
5	Success in use	56	80	40	57	20	29	58	83	60	86

From Table 14, it can be seen that 60 (86%) respondents strongly agreed and 40 (57%) agreed that computer literacy was a determining factor in the use of electronic resources. On the adequacy of e-resources, 60 (86%) respondents apiece strongly agreed and Agreed that electronic resources were not adequate in number in the University library as to enhance use. On whether the absence of library staff as support made the use of electronic resources more difficult; results revealed that majority of respondents i.e 56 (80%) agreed while 20 (26%) agreed strongly that it was true. This result has indicated that users of electronic resources require adequate computer skills to enable them take advantage and maximize their full potentials. Respondents were also asked if the absence of ICT technicians hindered their use of electronic resources in anyway, to which 20 (29%) agreed that it was true while 56 (80%) strongly accepted the conditions to be true. 40 (57%) of the respondents also agreed that when they succeed in the use of electronic resources their interest was sustained. Other factors that ranked high in inhibiting the successful use of electronic resources include – unstable power supply, unstable network among others. Sarasvady and Khatri (2009) in their study of use of electronic resources for implementing library consortia discovered that lack of

net connectivity is a main cause for the non-preference of electronic resources by respondents. This has been corroborated by the findings of this study.

KEY: SA-Strongly Agreed; A-Agreed; UD-Undecided; SD-Strongly Disagreed; D-Disagreed.

Conclusion

The tertiary institution that is Nigeria Defence Academy, Kaduna state studied has generally kept pace with the rest of the academic societies in providing electronic resources. The study discovered that the Academy is trying in providing electronic information resources. The study discovered that institution and its library has electronic resources like computers, VCD, DVD, flash drives. Similarly, the most available electronic services to users are the E-mails, online reference and electronic Alerts. On the use of electronic resources, the findings have shown that computers, internet and flash drives were used most by staff and other members of the academic communities. Also, users were more aware of electronic resources which can be available outside the library.

The main problem that inhibit the provision and effective use of electronic resources was funding which is grossly inadequate, while the problems that relate to operations were unstable power supply and service networks. It is concluded that when electronic resources are made available in our tertiary institutions, it will boost teaching, learning, research and other scholarly and professional activities through improved communication and access to information. Many users would resort to use them consequently this would enhance development in our institutions and the country at large.

Recommendations

In the light of the findings, the following recommendations are made.

It has been observed that VCD, DVD, Internet, online databases, e-journal, e-books, multimedia, CD-ROM and flash drives are all available in the institution. Therefore, accessibility should be provided for proper utilization of these resources. Since the ability to provide electronic resources and services depend largely on the availability of funds, provision should not be left to ETF alone but managements of the institution in the State should make concerted efforts through consultations and talk shows to impress on government regarding the value of electronic resources in enhancing research and training; hence the need for adequate funding to be able to provide these electronic resources. In addition, the institution should ensure that sufficient networked computers are available for

staff use. Information retrieval skills training should be embedded in the curriculum undertaken at the appropriate times and supported by academic staff. The academic staff must be aware of the services which are most beneficial to their courses and therefore their students. Workshops, and reference works should be revitalized in such a way that more awareness will be created for effective use of these resources and services in the university. For the computer illiteracy, inadequate electronic resources, absence of library staff assistance, absence of ICT technicians, success in the use of electronic resources, computer literacy programs should be provided to staff, sufficient electronic resources should also be provided, ICT technicians should employed to ensure that all ICT facilities are fully taken care of in University. This will help in providing access to the available electronic resources.

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